



BHCTP Monthly Discharge Monitoring Report

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Month: August-16
Facility: Central Treatment Plant
Location: Bunker Hill Superfund Site
Contract Number: W912DW-13-C-0026-P00012

<u>Total Flow For The Month From 006 Outfall:</u>	51,207,700	gallons
Sludge pumping to CIA sludge pond:	1,380,000	gallons
<u>Total Flow From Kellogg Tunnel:</u>	53,293,430	gallons

Percent of Influent Successfully Treated: 100.0%

13 sample days * 6 parameters (Pb, Cd, Zn, Mn, TSS & pH) = 78 potential exceedances
78 - 0 exceedances = 78 78/78 = 100%

Results of Sampling Efforts:

All sampling has been performed in accordance with specifications and the Sampling and Analysis Plan. QC and QA samples have been taken as required. All sample analysis results may be found within this DMR.

Performance Evaluation (PE) sampling for the CTP continued, with four PE samples delivered to SVL for this reporting period. The PE samples were identified as CTPXX (random CTP sites). These samples consisted of preserved 500-ml trace metal samples to be analyzed for Cd, Pb and Zn. The PE acceptable quantitation range is listed on the 'QC' page of this DMR.

Trip blank and rinsate samples were also taken, with the results being reported on the 'PTM-004,RB,TB' page of this DMR.

Highlights of Plant Maintenance and/or Plant Optimization:

08-01-16 Performed monthly fire extinguisher inspection. All CTP fire extinguishers are fully charged and in good working condition at this time.

08-01-16 Performed monthly pump and motor inspection. All CTP pumps and motors are in good condition at this time with the exception of the Rapid Mix gear box. Gear box vibration is increasing.

08-02-16 Performed the lime system six-month changeover. Placed lime silo A, slaker A and lime injection system #1 into service. Placed lime silo B, slaker and lime injection system #2 in standby mode.

08-03-16 Submitted lime slurry makeup water analytical results to the COR for distribution to CH2M Hill and EPA. The sample results are included in this DMR.

08-04-16 CTP operators attended their required annual physical examinations.

08-04-16 Operators dismantled the pump room city water supply pipe assembly and replaced a small section of deteriorated 4" water supply line. Operators inspected the remainder of the exposed pipe. The pipe that was visible to operators looked to be in good condition. The city water supply line was placed back into service.

08-04-16 The #3 sludge pump backflow prevention valve failed for the second time. A new check valve was ordered and will be installed upon delivery. The existing valve is approximately 40 years old. Operators shut down the #3 sludge pump, and locked and tagged it out.

08-09-16 Operators installed the new backflow prevention valve on the #3 sludge waste pump. The backflow valve was tested and the #3 sludge waste pump was placed back into service as the primary sludge disposal pump.

Operators dismantled the #3 sludge pump to inspect the pump interior components. All interior components including the impeller and pump housing were found to be in good condition with no excessively worn parts.

08-09-16 Performed the monthly no-load emergency generator run test and diagnostics. The emergency generator was operated for 30 minutes with no issues or errors to report.

08-16-16 Operators drained the lime slurry holding tank and provided assistance to CH2M Hill representative to inspect internal corrosion. Confined space evaluation and component lock-out/tag-out was performed prior to entry. CH2M Hill representative collected corrosion samples from the lime tank entry hatch and interior walls. CH2M Hill will submit an inspection report to the EPA and USACE COR.

08-17-16 Performed annual oil changes on the Clarifier main gear. Removed and sealed the oil drain pipe fittings to prevent future oil leaks.

08-18-16 Performed six-month oil changes on the Rapid Mix Tank and Aeration Basin mixer gear units. Also performed six-month oil changes on the Clarifier secondary and worm drive gears.

08-18-16 23:15 Operators responded to an auto dialer call-out. Flocculent injection alarm was activated by high winds. Operator reset the flocculent flow alarm and auto dialer.

08-23-16 Operators performed the monthly full load emergency generator run test. The emergency generator operated all CTP components for one hour as programmed with no issues or errors to report.

08-23-16 Operators completed six-month oil changes on all remaining pumps and motors.

08-25-16 Chief Operator, Process Engineer, Project Manager and COR attended the monthly CTP process review meeting. Process pH of 8.3 was discussed. KT discharge pumping schedule was reviewed. Process quality, plant operations and operator work schedules were reviewed. OMER projects were reviewed. Flocculent usage and estimates for the remainder of the FCI contract period was reviewed. FCI will purchase additional product to meet usage needs through the remainder of the contract period. Needed repairs to the 6" Godwin pump were discussed.

08-30-16 Pump room sump pump failed during the night. Operators purchased and installed a replacement sump pump. Operators also purchased a second pump and placed it in inventory on the inventory property list.

08-31-16 Performed monthly data totalizing and meter resets.

During this reporting period:

- The USACE-requested changes to the KT and treated outfall pages were implemented in this DMR.
- The Kellogg Tunnel discharge flow increased by 4% from August 2015, from 55.3 mg to 53.3 mg.
- The Kellogg Tunnel zinc concentration increased by 15% from August 2015, from an average of 66 mg/L to 76 mg/L.
- The CTP operating pH set point was increased to 8.5 from 8.3 during extended KT low-flow periods.
- The flocculent dosage remained at approximately 2 ppm to reduce process turbidity.
- The CTP sludge recycle rate remained at 400 gpm.
- CTP operators received one off-shift auto dialer call-out alarm. High winds caused the flocculent injection alarm to activate.
- CTP operators performed no pumping events from the Lined Pond.
- CTP operators verified Aeration Basin pH probe and grab sample values twice per day.
- CTP operators observed no Kellogg Tunnel mine or mill operations.

Lessons Learned

No significant lessons to report for last month.

MONITORING PERIOD					
YEAR	MO	DAY	YEAR	MO	DAY
2016	8	1	2016	8	31

PARAMETER		Quantity or Loading			Quality or Concentration				FREQUENCY OF ANALYSIS	SAMPLE TYPE
		MONTHLY AVERAGE	DAILY MAXIMUM	UNITS	MINIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	UNITS		
pH	Sample Measurement				7.05		7.30		Continuous	Meter
	Permit Required				6.0		10.0			
Flow Thru Treatment Plant	Sample Measurement	1.65	2.05	mgd						
	Permit Required		Daily							
Lead Total - Pb Effluent	Sample Measurement	0.05	0.06	lbs/day		0.004	0.005	mg/L	three samples/ week	Comp 24
	Permit Required	14.8	37.0			0.30	0.60	mg/L		
Zinc Total - Zn Effluent	Sample Measurement	2.99	3.99	lbs/day		0.22	0.24	mg/L	three samples/ week	Comp 24
	Permit Required	36.2	91.3			0.73	1.48	mg/L		
Cadmium - Cd Effluent	Sample Measurement	0.06	0.079	lbs/day		0.004	0.005	mg/L	three samples/ week	Comp 24
	Permit Required	2.40	6.10			0.050	0.100	mg/L		
Manganese - Mn Effluent	Sample Measurement	249	367	lbs/day		19.6	26.3	mg/L	three samples/ week	Comp 24
	No Permit Required					N/A	N/A	mg/L		
Total Suspended Solids - TSS	Sample Measurement	13.3	24	lbs/day		0.9	1.5	mg/L	three samples/ week	Comp 24
	Permit Required	985	1907			20	30	mg/L		

PREPARED BY: GARY FULTON

REVIEWED BY: Mark Reinsel, Ph.D., P.E.

NPDES DISCHARGE POINT 006
CENTRAL TREATMENT PLANT
MONTH: Aug-16

DAY	LEAD (Pb)		ZINC (Zn)		CADMIUM (Cd)		MANGANESE (Mn)		pH	FLOW	TSS		LOADING
	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day			mgd	mg/L	lbs/day
1	0.004	0.056	0.206	3.21	0.004	0.07	19.2	300	7.11	1.87	1.0	15.6	7.08
2		0.060		3.46		0.07		322		2.01		16.8	7.61
3	0.004	0.032	0.206	1.81	0.003	0.03	21.5	188	7.13	1.05	1.5	13.1	5.96
4		0.024		1.39		0.02		145		0.81		10.1	4.60
5	0.004	0.050	0.238	3.30	0.004	0.06	15.4	213	7.17	1.66	1.2	16.6	7.54
6		0.060		3.99		0.07		258		2.01		20.1	9.13
7		0.059		3.87		0.07		251		1.95		19.5	8.86
8	0.004	0.060	0.229	3.84	0.005	0.08	19.6	329	7.18	2.01	1.0	16.8	7.61
9		0.058		3.69		0.08		316		1.93		16.1	7.30
10	0.005	0.042	0.222	2.04	0.005	0.04	23.3	214	7.05	1.10	0.8	7.3	3.33
11		0.031		1.52		0.03		159		0.82		5.5	2.48
12	0.004	0.051	0.234	3.30	0.004	0.06	15.0	212	7.19	1.69	0.8	11.3	5.12
13		0.059		3.85		0.07		247		1.97		13.2	5.96
14		0.059		3.87		0.07		248		1.98		13.2	5.99
15	0.004	0.058	0.220	3.56	0.004	0.07	15.9	257	7.22	1.94	1.4	22.7	10.28
16		0.058		3.52		0.07		255		1.92		22.4	10.17
17	0.004	0.035	0.209	2.06	0.004	0.04	23.2	228	7.24	1.18	0.4	3.9	1.79
18		0.021		1.22		0.03		136		0.70		2.3	1.06
19	0.004	0.055	0.158	2.41	0.003	0.05	11.9	182	7.21	1.83	0.8	12.2	5.54
20		0.059		2.58		0.05		195		1.96		13.1	5.93
21		0.059		2.57		0.05		194		1.95		13.0	5.90
22	0.004	0.059	0.207	3.40	0.004	0.07	19.3	317	7.20	1.97	0.6	9.9	4.47
23		0.060		3.47		0.07		324		2.01		10.1	4.56
24	0.004	0.032	0.223	1.95	0.005	0.04	25.1	220	7.19	1.05	1.0	8.8	3.97
25		0.026		1.58		0.03		178		0.85		7.1	3.22
26	0.004	0.049	0.229	3.13	0.004	0.05	17.4	238	7.10	1.64	1.4	19.2	8.69
27		0.062		3.92		0.07		298		2.05		24.0	10.86
28		0.060		3.84		0.07		292		2.01		23.5	10.65
29	0.004	0.059	0.229	3.73	0.004	0.07	21.9	356	7.30	1.95	0.6	9.8	4.43
30		0.060		3.84		0.07		367		2.01		10.1	4.56
31	0.004	0.040	0.242	2.69	0.004	0.05	26.3	292	7.22	1.33	0.6	6.7	3.02
Total	0.051	1.554	3.05	92.6	0.06	1.75	275.0	7,730	100.5	51.2	13.1	413.8	187.7
Sample Events	14	31	14	31	14	31	14	31	14	31	14	31	31
Daily Average	0.004	0.050	0.22	2.99	0.004	0.057	19.6	249	7.18	1.65	0.9	13.3	6.05
Lab Detection Limit	0.003	0.004	0.001				0.004		0.01		0.800		

MIN 0.004 0.02 0.16 1.22 0.0032 0.02 11.90 136 7.05 0.70 0.40 2.34 1.06
MAX 0.0046 0.06 0.24 3.99 0.0047 0.08 26.30 367 7.30 2.05 1.50 23.95 10.86

Notes:

(X mg/L) * (1 kg/10^6 mg) * (2.205 lbs/kg) * (3.785 L/gal) * (10^6 gal/Mgal) * (Y Mgal/day) = (X) * (Y) * (8.345) in lbs/day

(X lbs/day) * (1 kg/2.205 lbs) = (X) / (2.205) in kg/day

KELLOGG TUNNEL DISCHARGE
 CENTRAL TREATMENT PLANT
 MONTH: Aug-16
 Data from SVL

DAY	LEAD (Pb)		ZINC (Zn)		CADMIUM (Cd)		MANGANESE (Mn)		pH	006 FLOW		TSS		
	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day		mgd	mg/L	lbs/day	kg/day	
1	0.442	6.90	58	897	0.096	1.50	78	1,220	3.22	1.87	97	1,514	686	
2		7.41		964		1.61		1,312		2.01		1,627	738	
3		3.87		504		0.84		685		1.05		850	385	
4	0.436	2.95	102	689	0.196	1.32	33	220	2.94	0.81	16	108	49	
5		6.04		1,413		2.72		452		1.66		222	101	
6		7.31		1,711		3.29		547		2.01		268	122	
7		7.09		1,660		3.19		530		1.95		260	118	
8	0.437	7.33	59	993	0.091	1.52	77	1,292	3.25	2.01	84	1,409	639	
9		7.04		953		1.46		1,240		1.93		1,353	614	
10		4.01		543		0.83		707		1.10		771	350	
11	0.439	3.00	108	739	0.196	1.34	32	220	2.87	0.82	38	260	118	
12		6.19		1,523		2.76		453		1.69		536	243	
13		7.22		1,775		3.22		528		1.97		625	283	
14		7.25		1,784		3.24		530		1.98		628	285	
15	0.434	7.03	55	892	0.089	1.43	77	1,248	3.27	1.94	79	1,279	580	
16		6.95		883		1.42		1,235		1.92		1,266	574	
17		4.27		543		0.87		759		1.18		778	353	
18	0.426	2.49	111	648	0.185	1.08	32	187	2.96	0.70	14	82	37	
19		6.51		1,695		2.83		489		1.83		214	97	
20		6.97		1,816		3.03		523		1.96		229	104	
21		6.93		1,806		3.01		521		1.95		228	103	
22	0.432	7.10	53	870	0.085	1.45	75	1,225	3.35	1.97	81	1,332	604	
23		7.25		887		1.48		1,250		2.01		1,359	616	
24		3.79		464		0.78		653		1.05		710	322	
25	0.413	2.93	95	672	0.174	1.23	30	214	2.86	0.85	15	106	48	
26		5.65		1,297		2.38		413		1.64		205	93	
27		7.07		1,622		2.98		517		2.05		257	116	
28		6.93		1,590		2.92		507		2.01		252	114	
29	0.407	6.62	45	727	0.079	1.28	74	1,207	3.36	1.95	77	1,253	568	
30		6.83		750		1.32		1,245		2.01		1,292	586	
31		4.52		496		0.88		824		1.33		855	388	
Total	3.87	183	685	33,809	1.19	59	508	22,951	28.1	51.2	501	22,125	10,034	
Sample Events	9	31	9	31	9	31	9	31	9	31	9	31	31	
Daily Average	0.430	5.92	76	1,091	0.132	1.91	56	740	3.12	1.65	56	714	324	

Notes:

(X mg/L) * (1 kg/10^6 mg) * (2.205 lbs/kg) * (3.785 L/gal) * (10^6 gal/Mgal) * (Y Mgal/day) = (X) * (Y) * (8.345) lbs/day

(X lbs/day) * (1 kg/2.205 lbs) = (X) / (2.205) kg/day

**PTM Effluent at Lined Storage Pond
CENTRAL TREATMENT PLANT**

Month: Aug-16

DATE	LEAD mg/L	ZINC mg/L	CADMUM mg/L	pH s.u.	TSS mg/L
08/11/16	0.005	10.9	1.40	6.58	1.2
08/25/16	0.004	9.7	1.27	6.89	1.0

**RINSATE AND TRIP BLANKS
CENTRAL TREATMENT PLANT**

Month: Jul-16

Rinsate and Trip Blank samples will be taken approximately every 20 QC events, or one each per month.

LOCATION Rinsate & Trip Blank	DATE	SAMPLE	LEAD mg/L	ZINC mg/L	CADMUM mg/L
PTM Discharge		RB-08-11-16	<0.01	<0.004	<0.002
Trip Blank (D.I.water)		TB-08-11-16	<0.01	<0.004	<0.002

Bunker Hill Central Treatment Plant																																	
Daily log August 2016																																	
			AERATION BASIN				CLARIFIER				DISCHARGE 006				RECYCLE SG			LIME SLURRY			SLUDGE PUMP		POND PUMP		SLUDGE GUN TEST		LINED POND						
			INFLUENT KT		a.m.		p.m.		a.m.		p.m.		TURB		TEMP		pH3		grab		TURB		FLOW		SG	GPM	SG	%solid	Closed/Open	pump #	min	ON	OFF
DATE	Operators		GPM	pH	SET	pH1	grab	pH1	grab	pH2	grab	pH2	grab	TURB	TEMP	pH3	grab	pH3	grab	TURB	FLOW	SG	GPM	SG	%solid	Closed/Open	pump #	min	ON	OFF	10' Out	20' Out	ESTIMATED
8/1	GF,SB		1451	3.15	8.3	8.4	8.3	8.3	8.3	7.7	7.8	7.8	7.8	0.99	60	7.4	7.2	7.3	7.2	0.80	1.87	1.040	400	1.069	10.7	254/25	3	110			8"	5"	2269.0 (1.0mg)
8/2	GF,SB,GC				8.3	8.3	8.4	8.6	8.6	7.7	8.0	7.9	7.9	1.18	61	7.4	7.4	7.4	7.5	1.10	2.01	1.041	400	1.069	10.7	260/25	3	110					2269.0
8/3	GF,SB,GC				8.5	8.6	8.5	8.6	8.6	8.1	7.9	8.0	7.9	1.14	60	7.2	7.6	7.2	7.4	0.98	1.05	1.029	400	1.069	10.7	193/12	3	0					2269.0
8/4	GF,SB,GC	645	3.07	8.5	8.5	8.5	8.3	8.3	8.1	8.0	8.0	7.9	7.9	0.88	58	7.4	7.2	7.4	7.2	0.82	0.81	1.031	400	1.071	11.0	202/12	3	50					2269.0
8/5	GF,GC				8.3	8.4	8.3	8.3	8.3	8.1	7.9	8.2	8.0	0.90	59	7.4	7.2	7.4	7.2	0.80	1.66	1.044	400	1.071	11.0	219/25	3	120					2269.0
8/6	GC				8.3	8.3	8.3	8.4	8.4	8.0	7.9	8.2	7.9	0.82	57	7.4	7.5	7.6	7.5	0.76	2.01	1.043	400	1.071	11.0	223/25	3	100					2269.0
8/7	SB				8.3	8.3	8.3	8.4	8.4	8.0	7.9	8.2	8.0	0.79	62	7.4	7.3	7.6	7.4	0.65	1.95	1.042	400	1.070	10.8	233/25	3	90					2269.0
8/8	GF,SB	1480	3.14	8.3	8.4	8.3	8.4	8.3	8.1	8.3	8.1	7.8	1.00	60	7.4	7.2	7.4	7.2	0.80	2.01	1.043	400	1.071	11.0	263/25	3	100					2269.0	
8/9	GF,GC,SB				8.3	8.3	8.3	8.7	7.7	8.1	7.8	8.1	8.1	1.24	60	7.5	7.6	7.4	7.3	0.95	1.93	1.042	400	1.071	11.0	238/25	3	100					2269.0
8/10	GF,GC				8.5	8.5	8.5	8.5	8.5	8.2	7.8	8.1	8.0	1.22	58	7.5	7.5	7.4	7.4	1.06	1.10	1.029	400	1.071	11.0	205/12	3	0					2269.0
8/11	GF,GC	630	3.02	8.5	8.5	8.5	8.3	8.3	8.1	7.8	8.0	8.0	8.0	0.85	57	7.5	7.2	7.4	7.3	0.62	0.82	1.034	400	1.073	11.3	219/12	3	60					2269.0
8/12	GC				8.3	8.4	8.3	8.3	8.3	8.0	8.1	7.9	0.50	58	7.5	7.4	7.4	7.3	0.53	1.69	1.039	400	1.072	11.1	236/25	3	90					2269.0	
8/13	GC				8.3	8.3	8.3	8.4	8.3	8.1	7.8	8.1	0.71	57	7.4	7.4	7.6	7.4	0.51	1.97	1.041	400	1.072	11.1	234/25	3	90					2269.0	
8/14	GF				8.3	8.3	8.3	8.4	8.3	8.1	7.9	8.1	0.85	60	7.3	7.2	7.3	7.2	0.60	1.98	1.041	400	1.070	10.8	235/25	3	90					2269.0	
8/15	GF,SB	1438	3.15	8.3	8.3	8.3	8.4	8.2	8.1	7.8	8.2	7.8	1.08	61	7.1	7.3	7.2	7.4	0.75	1.94	1.041	400	1.071	11.0	224/25	3	90					2269.0	
8/16	GF,SB,GC				8.3	8.4	8.3	8.5	8.5	8.0	7.9	8.1	8.0	1.15	63	7.4	7.3	7.4	7.5	0.95	1.92	1.038	400	1.070	10.8	223/25	3	60					2269.0
8/17	GF,SB,GC				8.5	8.5	8.5	8.6	8.6	8.2	8.2	8.2	8.3	2.50	61	7.4	7.3	7.4	7.3	1.50	1.18	1.035	400	1.070	10.8	250/10	3	15					2269.0
8/18	GF,SB,GC	640	3.14	8.5	8.5	8.4	8.4	8.4	8.1	8.0	8.2	8.0	3.90	61	7.6	7.4	7.5	7.5	3.03	0.70	1.034	400	1.071	11.0	200/10	3	45					2268.5 (.75 mg)	
8/19	GC,GF				8.3	8.3	8.4	8.4	8.4	8.1	8.0	8.2	8.0	2.56	61	7.5	7.6	7.7	7.6	2.80	1.83	1.038	400	1.073	11.3	242/25	3	85					2268.5
8/20	GC				8.3	8.6	8.6	8.3	8.3	8.1	7.9	8.0	1.83	60	7.4	7.5	7.5	7.5	1.91	1.96	1.039	400	1.072	11.1	385/25	3	90					2269.0 (1.0mg)	
8/21	SB				8.3	8.3	8.3	8.3	8.3	8.0	7.9	8.0	1.53	58	7.4	7.4	7.6	7.5	1.41	1.95	1.039	400	1.071	11.0	257/25	3	90					2269.0	
8/22	GF,SB	1431	3.14	8.3	8.3	8.3	8.3	8.3	8.3	7.9	7.9	8.0	1.50	60	7.1	7.2	7.4	7.3	1.30	1.97	1.039	400	1.070	10.8	226/25	3	90					2269.0	
8/23	GF,SB,GC				8.3	8.3	8.3	8.5	8.5	7.9	7.9	8.0	1.50	58	7.4	7.2	7.6	7.3	1.27	2.01	1.042	400	1.071	11.1	236/25								

CENTRAL TREATMENT PLANT**MISCELLANEOUS FLOWS**Month : **Aug-16**

Date	KT Flow Meter Reading
7/31/2016	0
8/31/2016	53,293,430
Total	53,293,430

Date	006 Flow Meter Reading
7/31/2016	0
8/31/2016	51,207,700
Total	51,207,700

Sweeny Pump Station Reading				
Date	#1 Pump	620 gpm	#2 Pump	500 gpm
7/31/2016	170.0	Hours	785.0	Hours
8/31/2016	170.0	Hours	785.0	Hours
Total Hours	0.0	Hours	0.0	Hours
Total Flow for 004/Sweeny For The Month =	0		0	Gallons

PTM Discharge Flow		
Date	Flow (gpm)	
08/04/16	8.0	
08/18/16	6.0	

Date	Lined Storage Pond Water Level			
7/31/2016	1,000,000	gal	Elev. =	2269.0
8/31/2016	1,000,000	gal	Elev. =	2269.0

KELLOGG TUNNEL ANNUAL DISCHARGE FLOWS 2000-2009										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Jan.	61,000,000	61,677,510	54,606,100	53,066,890	52,223,080	53,150,000	56,050,900	56,281,000	53,465,820	50,936,960
Feb.	57,600,000	45,584,000	52,840,000	46,493,470	48,306,920	49,860,000	51,188,000	50,511,300	49,282,209	48,146,111
March	60,730,000	57,740,360	50,452,060	60,162,290	59,852,720	58,073,000	56,332,830	65,443,650	54,578,130	61,712,540
April	68,680,000	54,846,000	65,583,230	63,335,350	50,715,310	53,775,350	72,039,280	66,636,500	61,690,530	63,055,350
May	97,719,900	57,501,901	76,082,410	63,335,350	53,245,000	54,181,650	72,027,000	63,203,308	86,680,760	70,233,580
June	69,800,000	55,835,590	67,299,960	59,532,434	50,451,170	51,750,000	68,385,600	57,981,410	82,622,590	64,623,180
July	63,698,850	53,652,330	64,820,120	66,252,746	56,538,980	55,255,000	64,054,000	58,282,900	66,324,500	61,535,000
Aug.	66,707,120	45,289,000	58,212,940	62,074,750	52,002,140	49,970,000	64,621,000	55,335,900	65,168,620	56,446,670
Sept.	55,797,530	50,276,020	60,140,460	43,789,000	49,208,020	49,987,000	54,515,270	50,471,870	61,074,020	57,006,430
Oct.	60,424,720	50,660,840	54,485,871	52,869,290	59,601,690	52,807,000	57,610,030	50,086,330	58,666,300	55,830,000
Nov.	53,408,660	50,660,840	51,072,259	47,600,000	51,948,000	50,722,600	55,191,700	50,779,040	52,041,780	54,956,800
Dec.	56,414,870	53,464,780	56,034,000	56,413,080	56,770,000	54,904,400	60,486,900	53,716,210	55,727,260	54,542,700
Totals	771,981,650	637,189,171	711,629,410	674,924,650	640,863,030	634,436,000	732,502,510	678,729,418	747,322,519	699,025,321

KELLOGG TUNNEL ANNUAL DISCHARGE FLOWS 2010-2019										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan.	55,503,180	61,797,170	58,434,610	61,855,400	57,478,450	58,440,540	52,196,730			
Feb.	50,819,910	54,556,227	57,763,170	59,383,290	54,607,950	59,767,470	53,694,400			
March	54,691,420	61,373,630	67,236,650	66,264,780	65,396,350	64,468,230	63,967,920			
April	56,255,340	65,687,340	81,233,630	69,619,100	65,618,770	63,056,840	63,323,620			
May	58,825,640	84,365,390	86,826,340	71,496,380	80,598,590	61,898,200	58,147,240			
June	56,770,200	79,985,540	83,440,990	64,663,900	65,623,330	56,368,540	53,149,810			
July	56,727,510	79,346,330	74,315,690	62,844,790	63,425,030	55,655,000	56,521,710			
Aug.	56,239,370	70,377,570	68,986,900	58,459,380	61,486,270	55,316,100	53,293,430			
Sept.	54,109,980	60,404,280	62,270,300	58,097,500	56,279,590	53,890,000				
Oct.	55,480,200	62,403,480	59,991,850	58,325,780	60,659,850	52,082,800				
Nov.	54,856,880	58,430,700	57,184,220	56,215,000	55,065,100	49,812,540				
Dec.	54,607,330	58,617,700	61,750,390	56,932,530	59,770,540	51,521,900				
Totals	664,886,960	797,345,357	819,434,740	744,157,830	746,009,820	682,278,160	454,294,860	0	0	0

Yellow indicates record monthly flow as well as record annual flow

KELLOGG TUNNEL ZINC DATA

	Concentration (mg/L)												
<u>Month</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Jan.		86	81	79	63	70	61	72	57	68	41	46	50
Feb.		86	91	96	55	72	57	95	58	68	41	68	52
March		94	116	86	65	68	53	86	58	69	58	81	63
April		98	121	140	85	80	50	137	176	86	107	92	115
May		105	231	179	318	136	57	377	215	150	177	87	138
June		107	182	118	271	143	68	347	164	106	131	78	108
July		90	144	111	198	117	75	181	136	87	87	75	81
Aug.		87	112	92	132	94	79	130	110	86	76	66	76
Sept.		84	107	80	107	76	81	132	107	75	66	63	
Oct.	59	81	100	88	99	75	70	86	70	67	63	54	
Nov.	66	79	88	88	104	63	57	95	71	70	55	44	
Dec.	67	62	78	65	76	59	61	88	69	54	49	55	
average	64	88	121	102	131	88	64	152	108	82	79	67	
lime usage (tons/day)	2.59	3.23	2.76	4.78	3.24	2.16	4.31	3.93	2.46	2.70	1.99		
Zinc Conc. Increase/Decrease		37%	-16%	29%	-33%	-27%	138%	-29%	-24%	-4%	-15%		
Lime Usage Increase/Decrease		25%	-15%	73%	-32%	-33%	100%	-9%	-37%	10%	-26%		

Bunker Hill Superfund Site							
Kellogg, Idaho							
Central Treatment Plant Review							
Month: Aug-16							
SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
006/CTP Outfall	08/01/16	Cadmium	0.004	0.005	mg/L	-4.4%	103%
		Lead	0.004	0.004	mg/L	0.0%	97%
Lab Duplicate		Manganese	19.2	19.3	mg/L	-0.5%	
		Zinc	0.206	0.206	mg/L	0.0%	100%
		pH	7.11	7.10	s.u.	0.1%	
		TSS	1.0	1.0	mg/L	0.0%	
Kellogg Tunnel	08/01/16	Cadmium	0.093	0.096	mg/L	-3.0%	
		Lead	0.425	0.442	mg/L	-3.9%	
QC Sample		Manganese	77.8	78.2	mg/L	-0.5%	
		Zinc	57.6	57.5	mg/L	0.2%	
		pH	3.22	3.22	s.u.	0.0%	
		TSS	93.0	97.0	mg/L	-4.2%	
Kellogg Tunnel	08/01/16	Cadmium	0.096	0.095	mg/L	1.2%	103%
		Lead	0.442	0.438	mg/L	0.9%	96%
Lab Duplicate		Manganese	78.2	78.6	mg/L	-0.5%	
		Zinc	57.5	58.1	mg/L	-1.0%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	08/03/16	Cadmium	0.003	0.003	mg/L	-3.0%	100%
		Lead	0.004	0.004	mg/L	0.0%	93%
Lab Duplicate		Manganese	21.5	21.3	mg/L	0.9%	109%
		Zinc	0.206	0.199	mg/L	3.5%	94%
		pH	7.13	7.09	s.u.	0.6%	
		TSS	1.2	1.2	mg/L	0.0%	
Performance Evaluation Sample	08/04/16	Cadmium	0.031	0.050	mg/L	-47.5%	
(CTPXX-08-04-16)		Lead	0.185	0.300	mg/L	-47.4%	
		Zinc	0.512	0.730	mg/L	-35.1%	
					mg/L		
CTPXX-08-04-16	08/04/16	Cadmium	0.031	0.357	mg/L	-168.2%	99%
		Lead	0.185	0.217	mg/L	-15.9%	105%
Lab Duplicate		Manganese	0.004	0.002	mg/L	52.3%	100%
		Zinc	0.512	0.601	mg/L	-16.0%	117%
006/CTP Outfall	08/05/16	Cadmium	0.004	0.004	mg/L	7.2%	101%
		Lead	0.004	0.004	mg/L	0.0%	96%
Lab Duplicate		Manganese	15.4	15.0	mg/L	2.6%	
		Zinc	0.238	0.236	mg/L	0.8%	97%
		pH	7.17	7.12	s.u.	0.7%	
		TSS	1.2	1.2	mg/L	0.0%	
Kellogg Tunnel	08/08/16	Cadmium	0.091	0.091	mg/L	-0.3%	104%
		Lead	0.437	0.436	mg/L	0.2%	98%
Lab Duplicate		Manganese	77.0	77.5	mg/L	-0.6%	
		Zinc	59.2	64.7	mg/L	-8.9%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	08/08/16	Cadmium	0.005	0.005	mg/L	4.3%	105%

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
Lab Duplicate		Lead	0.004	0.004	mg/L	0.0%	99%
		Manganese	19.6	19.4	mg/L	1.0%	83%
		Zinc	0.229	0.229	mg/L	0.0%	101%
		pH	7.18	7.18	s.u.	0.0%	
		TSS	1.0	1.0	mg/L	0.0%	
006/CTP Outfall	08/10/16	Cadmium	0.005	0.004	mg/L	4.4%	106%
		Lead	0.004	0.004	mg/L	0.0%	98%
		Manganese	23.3	23.4	mg/L	-0.4%	108%
		Zinc	0.222	0.223	mg/L	-0.4%	98%
		pH	7.05	7.00	s.u.	0.7%	
Performance Evaluation Sample (CTPXX-08-11-16)	08/11/16	TSS	0.8	0.8	mg/L	0.0%	
		Cadmium	0.054	0.050	mg/L	7.3%	
		Lead	0.325	0.300	mg/L	8.0%	
		Zinc	0.907	0.730	mg/L	21.6%	
					mg/L		
PTM Discharge QC Sample	08/11/16	Cadmium	1.40	1.38	mg/L	1.4%	
		Lead	0.005	0.005	mg/L	5.9%	
		Zinc	10.9	10.8	mg/L	0.9%	
		pH	6.58	2.87	s.u.	78.5%	
		TSS	1.2	1.0	mg/L	18.2%	
TB-08-11-16	08/11/16	Cadmium	0.001	0.001	mg/L	0.0%	100%
		Lead	0.004	0.004	mg/L	0.0%	101%
		Manganese	0.002	0.002	mg/L	0.0%	101%
		Zinc	0.003	0.003	mg/L	0.0%	100%
					mg/L		
006/CTP Outfall	08/12/16	Cadmium	0.004	0.004	mg/L	0.0%	102%
		Lead	0.004	0.004	mg/L	0.0%	97%
		Manganese	15.0	15.5	mg/L	-3.3%	
		Zinc	0.234	0.239	mg/L	-2.1%	93%
		pH	7.19	7.16	s.u.	0.4%	
Lab Duplicate		TSS	0.8	0.8	mg/L	0.0%	
		Cadmium	0.089	0.091	mg/L	-2.7%	104%
		Lead	0.434	0.443	mg/L	-2.1%	98%
		Manganese	77.1	79.2	mg/L	-2.7%	107%
		Zinc	55.1	67.9	mg/L	-20.8%	
Kellogg Tunnel	08/15/16	pH			s.u.		
		TSS			mg/L		
		Cadmium	0.089	0.091	mg/L	-2.7%	104%
		Lead	0.434	0.443	mg/L	-2.1%	98%
		Manganese	77.1	79.2	mg/L	-2.7%	107%
Lab Duplicate		Zinc	55.1	67.9	mg/L	-20.8%	
		pH			s.u.		
		TSS			mg/L		
		Cadmium	0.004	0.004	mg/L	7.1%	98%
		Lead	0.004	0.004	mg/L	0.0%	93%
006/CTP Outfall	08/15/16	Manganese	15.9	16.0	mg/L	-0.6%	
		Zinc	0.220	0.220	mg/L	0.0%	99%
		pH	7.22	7.15	s.u.	1.0%	
		TSS	1.4	1.4	mg/L	0.0%	
					mg/L		
006/CTP Outfall	08/17/16	Cadmium	0.004	0.005	mg/L	-4.5%	104%
		Lead	0.004	0.004	mg/L	0.0%	98%
		Manganese	23.2	23.4	mg/L	-0.9%	
		Zinc	0.209	0.209	mg/L	0.0%	95%
		pH	7.24	7.21	s.u.	0.4%	
Lab Duplicate		TSS	0.4	0.4	mg/L	0.0%	
		Cadmium	0.052	0.050	mg/L	3.3%	
		Lead	0.313	0.300	mg/L	4.2%	
Performance Evaluation	08/18/16						

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
Sample (CTPXX-08-18-16)		Zinc	0.866	0.730	mg/L	17.0%	
					mg/L		
CTPXX-08-18-16	08/18/16	Cadmium	0.052	0.052	mg/L	-1.3%	97%
		Lead	0.313	0.317	mg/L	-1.3%	97%
Lab Duplicate		Manganese	0.002	0.002	mg/L	0.0%	102%
		Zinc	0.866	0.876	mg/L	-1.1%	94%
006/CTP Outfall	08/19/16	Cadmium	0.003	0.003	mg/L	3.2%	101%
		Lead	0.004	0.004	mg/L	0.0%	96%
Lab Duplicate		Manganese	11.9	12.0	mg/L	-0.8%	89%
		Zinc	0.158	0.169	mg/L	-6.7%	93%
		pH	7.21	7.14	s.u.	1.0%	
		TSS	0.8	0.8	mg/L	0.0%	
Kellogg Tunnel	08/22/16	Cadmium	0.085	0.084	mg/L	0.8%	99%
		Lead	0.432	0.426	mg/L	1.4%	93%
Lab Duplicate		Manganese	74.5	75.3	mg/L	-1.1%	
		Zinc	52.9	52.6	mg/L	0.6%	
		pH			s.u.		
		TSS			mg/L		
006/CTP Outfall	08/22/16	Cadmium	0.004	0.004	mg/L	-4.8%	100%
		Lead	0.004	0.004	mg/L	0.0%	94%
Lab Duplicate		Manganese	19.3	19.9	mg/L	-3.1%	
		Zinc	0.207	0.211	mg/L	-1.9%	95%
		pH	7.20	7.21	s.u.	-0.1%	
		TSS	0.6	0.6	mg/L	0.0%	
006/CTP Outfall	08/24/16	Cadmium	0.005	0.005	mg/L	2.2%	
		Lead	0.004	0.004	mg/L	0.0%	
QC Sample		Manganese	25.1	25.1	mg/L	0.0%	
		Zinc	0.220	0.220	mg/L	0.0%	
		pH	7.19	7.24	s.u.	-0.7%	
		TSS	1.0	1.0	mg/L	0.0%	
006/CTP Outfall	08/24/16	Cadmium	0.005	0.005	mg/L	0.0%	100%
		Lead	0.004	0.004	mg/L	0.0%	95%
Lab Duplicate		Manganese	25.1	25.4	mg/L	-1.2%	
		Zinc	0.223	0.225	mg/L	-0.9%	92%
		pH	7.19	7.16	s.u.	0.4%	
		TSS	1.0	1.0	mg/L	0.0%	
Performance Evaluation Sample (CTPXX-08-25-16)	08/25/16	Cadmium	0.051	0.050	mg/L	2.4%	
		Lead	0.324	0.300	mg/L	7.7%	
		Zinc	0.873	0.730	mg/L	17.8%	
					mg/L		
CTPXX-08-25-16	08/25/16	Cadmium	0.051	0.050	mg/L	3.0%	93%
		Lead	0.324	0.312	mg/L	3.8%	90%
Lab Duplicate		Manganese	0.004	0.002	mg/L	54.5%	95%
		Zinc	0.873	0.845	mg/L	3.3%	90%
006/CTP Outfall	08/26/16	Cadmium	0.004	0.004	mg/L	0.0%	100%
		Lead	0.004	0.004	mg/L	0.0%	95%
Lab Duplicate		Manganese	17.4	17.7	mg/L	-1.7%	
		Zinc	0.229	0.232	mg/L	-1.3%	97%
		pH	7.10	7.05	s.u.	0.7%	
		TSS	1.4	1.4	mg/L	0.0%	

Monthly Performance Evaluation

Acceptable Quantitation Range

	Analyte	Concentration	Acceptable Quantitation Range	
		(mg/L)	(mg/L)	
	Cadmium	0.050	0.0458-0.0573	
	Lead	0.300	0.2588-0.3525	
	Zinc	0.730	0.6296-0.8395	

Note: The PE quantitation range (listed above) from our PE sample source is less than required in the contract. The contract limits (listed below) have been utilized for this evaluation.

Note: Performance evaluation samples have been given the designation "CTPXX" for purposes of blind submission to the analytical laboratory.

Analytical Requirements			
	Quantitation	Accuracy	Completeness

SAMPLE	DATE	PARAMETER	VALUE	QC/dup	UNITS	PRECISION	MATRIX SPIKE DATA
LOCATION			RESULTS			% RPD	% RECOVERY
		Cadmium	$\leq 0.025 \text{ mg/L}$		80-120%	90%	
		Lead	$\leq 0.15 \text{ mg/L}$		80-120%	90%	
		Manganese	$< 0.025 \text{ mg/L}$		80-120%	90%	
		Zinc	$\leq 0.30 \text{ mg/L}$		80-120%	90%	
		pH	$\leq 0.1 \text{ pH unit}$		90-110%	90%	
		TSS	$\leq 15 \text{ mg/L}$		75-125%	90%	

Bunker Hill Superfund Site									
Kellogg, Idaho									
Central Treatment Plant Review									
Month: Aug-16									
CONCENTRATION (mg/L)									
SAMPLE	DATE	PARAMETER	SPIKE	DUPLICATE	SPIKE	PRECISION			
LOCATION			ADDED	RESULT	RESULT	% RPD			
006/CTP Outfall	08/01/16	Cadmium	1.00	1.03	1.04	0.8%			
MS/MSD		Lead	1.00	0.966	0.974	0.8%			
		Manganese	1.00	20.4	20.6	0.9%			
		Zinc	1.00	1.19	1.21	1.5%			
Kellogg Tunnel	08/01/16	Cadmium	1.00	1.13	1.13	0.3%			
MS/MSD		Lead	1.00	1.40	1.40	0.4%			
		Manganese	1.00	78.8	78.5	0.4%			
		Zinc	1.00	59.5	59.1	0.6%			
006/CTP Outfall	08/03/16	Cadmium	1.00	0.999	1.00	0.2%			
MS/MSD		Lead	1.00	0.931	0.931	0.0%			
		Manganese	1.00	22.5	22.6	0.5%			
		Zinc	1.00	1.14	1.14	0.0%			
PE Sample	08/04/16	Cadmium	1.00	1.02	1.02	0.0%			
MS/MSD		Lead	1.00	1.23	1.23	0.0%			
CTPXX-08-04-16		Manganese	1.00	1.01	1.00	1.0%			
		Zinc	1.00	1.67	1.68	0.8%			
006/CTP Outfall	08/05/16	Cadmium	1.00	1.03	1.02	1.0%			
MS/MSD		Lead	1.00	0.966	0.955	1.1%			
		Manganese	1.00	16.0	16.6	3.8%			
		Zinc	1.00	1.21	1.21	0.5%			
Kellogg Tunnel	08/08/16	Cadmium	1.00	1.13	1.13	0.5%			
MS/MSD		Lead	1.00	1.41	1.42	0.3%			
		Manganese	1.00	78.3	78.4	0.1%			
		Zinc	1.00	57.4	64.7	12.1%			
006/CTP Outfall	08/08/16	Cadmium	1.00	1.06	1.06	0.0%			
MS/MSD		Lead	1.00	0.994	0.992	0.2%			
		Manganese	1.00	20.6	20.5	0.7%			
		Zinc	1.00	1.24	1.24	0.0%			
006/CTP Outfall	08/10/16	Cadmium	1.00	1.06	1.07	0.6%			
MS/MSD		Lead	1.00	0.978	0.984	0.7%			
		Manganese	1.00	24.0	24.4	1.6%			
		Zinc	1.00	1.18	1.20	1.7%			
TB-08-11-16	08/11/16	Cadmium	1.00	0.992	1.00	0.8%			
MS/MSD		Lead	1.00	1.00	1.01	0.9%			
		Manganese	1.00	1.01	1.01	0.3%			
		Zinc	1.00	0.995	1.00	0.9%			
006/CTP Outfall	08/12/16	Cadmium	1.00	1.02	1.02	0.8%			
MS/MSD		Lead	1.00	0.964	0.970	0.6%			
		Manganese	1.00	16.7	16.6	1.1%			
		Zinc	1.00	1.17	1.16	0.4%			
Kellogg Tunnel	08/15/16	Cadmium	1.00	1.12	1.13	0.3%			
MS/MSD		Lead	1.00	1.41	1.42	0.3%			
		Manganese	1.00	77.8	78.2	0.5%			
						Sample conc. >> spike level			

		Zinc	1.00	59.2	65.8	10.6%		
006/CTP Outfall	08/15/16	Cadmium	1.00	0.994	0.982	1.3%		
MS/MSD		Lead	1.00	0.937	0.928	1.0%		
		Manganese	1.00	16.9	16.7	1.4%	Sample conc. >> spike level	
		Zinc	1.00	1.18	1.20	2.4%		
006/CTP Outfall	08/17/16	Cadmium	1.00	1.04	1.04	0.2%		
MS/MSD		Lead	1.00	0.981	0.983	0.2%		
		Manganese	1.00	24.1	23.8	1.5%	Sample conc. >> spike level	
		Zinc	1.00	1.16	1.16	0.0%		
PE Sample	08/18/16	Cadmium	1.00	1.02	1.02	0.1%		
MS/MSD		Lead	1.00	1.29	1.28	0.3%		
CTPXX-08-18-16		Manganese	1.00	1.02	1.02	0.2%	Sample conc. >> spike level	
		Zinc	1.00	1.82	1.81	0.6%		
006/CTP Outfall	08/19/16	Cadmium	1.00	1.01	1.01	0.0%		
MS/MSD		Lead	1.00	0.956	0.961	0.5%		
		Manganese	1.00	12.8	12.8	0.1%	Sample conc. >> spike level	
		Zinc	1.00	1.08	1.08	0.6%		
Kellogg Tunnel	08/22/16	Cadmium	1.00	1.06	1.07	1.7%		
MS/MSD		Lead	1.00	1.33	1.36	1.8%		
		Manganese	1.00	78.4	76.8	2.0%	Sample conc. >> spike level	
		Zinc	1.00	57.3	54.5	4.9%		
006/CTP Outfall	08/22/16	Cadmium	1.00	1.00	1.01	0.5%		
MS/MSD		Lead	1.00	0.940	0.941	0.1%		
		Manganese	1.00	21.0	21.2	0.9%	Sample conc. >> spike level	
		Zinc	1.00	1.16	1.16	0.1%		
006/CTP Outfall	08/25/16	Cadmium	1.00	1.00	1.00	0.4%		
MS/MSD		Lead	1.00	0.947	0.949	0.3%		
		Manganese	1.00	26.2	26.6	1.4%	Sample conc. >> spike level	
		Zinc	1.00	1.14	1.14	0.6%		
PE Sample	08/25/16	Cadmium	1.00	0.955	0.978	2.4%		
MS/MSD		Lead	1.00	1.21	1.23	1.9%		
CTPXX-08-25-16		Manganese	1.00	0.940	0.955	1.7%	Sample conc. >> spike level	
		Zinc	1.00	1.72	1.77	2.8%		
006/CTP Outfall	08/26/16	Cadmium	1.00	1.04	1.00	3.3%		
MS/MSD		Lead	1.00	0.985	0.953	3.3%		
		Manganese	1.00	18.8	18.6	1.0%	Sample conc. >> spike level	
		Zinc	1.00	1.24	1.20	3.4%		
006/CTP Outfall	08/29/16	Cadmium	1.00	0.975	0.980	0.5%		
MS/MSD		Lead	1.00	0.902	0.914	1.3%		
		Manganese	1.00	23.8	23.4	1.8%	Sample conc. >> spike level	
		Zinc	1.00	1.13	1.15	2.0%		
Kellogg Tunnel	08/29/16	Cadmium	1.00	1.00	1.08	7.5%		
MS/MSD		Lead	1.00	1.25	1.34	6.8%		
		Manganese	1.00	71.7	75.6	5.3%	Sample conc. >> spike level	
		Zinc	1.00	42.8	53.9	22.9%		
006/CTP Outfall	08/31/16	Cadmium	1.00	0.986	0.983	0.2%		
MS/MSD		Lead	1.00	0.906	0.904	0.2%		
		Manganese	1.00	26.8	27.5	2.4%	Sample conc. >> spike level	
		Zinc	1.00	1.13	1.13	0.7%		

USACE PRIME CONTRACTOR
Monthly Record of Work-Related Injuries/Illnesses & Exposure

In accordance with the provisions of EM 565-1, Section C1 (Policy), Kenjiwakan, Paragraph 11, Action Reporting and Recovery, you are to forward to your Commandant or your Commandant's designee a copy of all information available concerning any accident involving an aircraft or aircraft component which occurs during flight or ground movement. This includes all information concerning the cause of the accident, the nature and extent of damage, and the names and addresses of all persons involved. It also includes all information concerning the recovery of the aircraft and its equipment, and the names and addresses of all persons involved.

In accordance with the provisions of EM 565-1, Section C1 (Policy), Kenjiwakan, Paragraph 11, Action Reporting and Recovery, you are to forward to your Commandant or your Commandant's designee a copy of all information available concerning any accident involving an aircraft or aircraft component which occurs during flight or ground movement. This includes all information concerning the cause of the accident, the nature and extent of damage, and the names and addresses of all persons involved. It also includes all information concerning the recovery of the aircraft and its equipment, and the names and addresses of all persons involved.

No accidents reported

Month:	5/21/2014	Exposure Hours	54 hours
Year To Date:	3,204 hours	Number of Facility Visits	1
		Condition of Record	0
		Comments	<i>None</i>
Signature:			
<i>[Signature]</i>			

CTP Mine Water Line Open Channel Inspection Form

Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.

Date: August 4, 2016

Inspected By:

Gary Coast, Steve Brunner'

Item Inspected	Condition	Comments	
Channel Sections and Joints	Good / Poor	Check for cracks	Ok
Channel Inlet Connection @ KT	Good / Poor	Check for cracks	Ok
Channel Outlet/Pipeline Inlet	Good / Poor	Check for cracks	Ok
Channel Bottom (during low flows)	Good / Poor		Ok
Bottom Joints (during low flows)	Good / Poor		Ok
Trash Rack Assembly Rail Units	Good / Poor	Check for corrosion and bolt tightness	Ok
Trash Racks	Good / Poor	Removed debris from trash racks	
Parshall Flume	Good / Poor	Check fiberglass and joint connections	Ok

General Comments:

Bunker mine has no pumps operating at this time.

The Kellogg Tunnel flow at this time is 0.93 mgd (645 gpm), pH at this time is 3.07

The concrete flume walls are beginning to deteriorate approximately 6" up from the flume bottom.

The submerged area of the concrete is pitting and is now approximately 1/2" indented.

Alternate hand held staff gauge was used to verify flume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct, no adjustments were needed.

CTP Mine Water Line Open Channel Inspection Form

Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.

Date: August 11, 2016

Inspected By:

Gary Coast, Steve Brunner

Item Inspected	Condition	Comments	
Channel Sections and Joints	Good / Poor	Check for cracks	Ok
Channel Inlet Connection @ KT	Good / Poor	Check for cracks	Ok
Channel Outlet/Pipeline Inlet	Good / Poor	Check for cracks	Ok
Channel Bottom (during low flows)	Good / Poor		Ok
Bottom Joints (during low flows)	Good / Poor		Ok
Trash Rack Assembly Rail Units	Good / Poor	Check for corrosion and bolt tightness	Ok
Trash Racks	Good / Poor	Removed debris from trash racks	
Parshall Flume	Good / Poor	Check fiberglass and joint connections	Ok

General Comments:

The Kellogg Tunnel flow at this time is 0.91 mgd (630 gpm), pH at this time is 3.02.

The concrete flume walls are beginning to deteriorate approximately 6" up from the flume bottom.

The submerged area of the concrete is pitting and is now approximately 1/2" indented.

Alternate hand held staff gauge was used to verify flume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct, no adjustments were needed.

Operators collected no sediment from the flume area.

CTP Mine Water Line Open Channel Inspection Form

Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.

Date: August 18, 2016

Inspected By:

Gary Coast, Steve Brunner

Item Inspected	Condition	Comments	
Channel Sections and Joints	Good / Poor	Check for cracks	Ok
Channel Inlet Connection @ KT	Good / Poor	Check for cracks	Ok
Channel Outlet/Pipeline Inlet	Good / Poor	Check for cracks	Ok
Channel Bottom (during low flows)	Good / Poor		Ok
Bottom Joints (during low flows)	Good / Poor		Ok
Trash Rack Assembly Rail Units	Good / Poor	Check for corrosion and bolt tightness	Ok
Trash Racks	Good / Poor	Removed debris from trash racks	
Parshall Flume	Good / Poor	Check fiberglass and joint connections	Ok

General Comments:

The Kellogg Tunnel flow at this time is 0.92 mgd (640 gpm), pH at this time is 3.14.

The concrete flume walls are beginning to deteriorate approximately 6" up from the flume bottom.

The submerged area of the concrete is pitting and is now approximately 1/2" indented.

Alternate hand held staff gauge was used to verify flume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct, no adjustments were needed.

Operators collected approximately 1 gallon of sediment from the flume area.

Sediment collected from the flume area was disposed of at the CIA sludge pond.

CTP Mine Water Line Open Channel Inspection Form

Note: This form should be utilized weekly during the regular channel cleanout.
Results will be include with the Daily Quality Control Report and monthly DMR.

Date: August 25, 2016

Inspected By:

Gary Coast, Steve Brunner

Item Inspected	Condition	Comments	
Channel Sections and Joints	Good / Poor	Check for cracks	Ok
Channel Inlet Connection @ KT	Good / Poor	Check for cracks	Ok
Channel Outlet/Pipeline Inlet	Good / Poor	Check for cracks	Ok
Channel Bottom (during low flows)	Good / Poor		Ok
Bottom Joints (during low flows)	Good / Poor		Ok
Trash Rack Assembly Rail Units	Good / Poor	Check for corrosion and bolt tightness	Ok
Trash Racks	Good / Poor	Removed debris from trash racks	
Parshall Flume	Good / Poor	Check fiberglass and joint connections	Ok

General Comments:

The Kellogg Tunnel flow at this time is 0.91 mgd (630 gpm), pH at this time is 3.01.

The concrete flume walls are beginning to deteriorate approximately 6" up from the flume bottom.

The submerged area of the concrete is pitting and is now approximately 1/2" indented.

Alternate hand held staff gauge was used to verify flume staff gauge and flow meter readings.

Ultrasonic flow meter calibration was correct, no adjustments were needed.



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 29-Jul-16
		Received: 29-Jul-16
		Reported: 02-Aug-16 14:20

LAB #	W6GD636-01	W6GD636-02	-	-	-	-
SAMPLE ID	CW-07-29-16	FW-07-29-16	-	-	-	-
	07/29/2016 07:00	07/29/2016 07:00	-	-	-	-
Reporting Limit						

Anions by Ion Chromatography (Water)

Chloride	0.20 mg/L	1.71	0.78	-	-	-	-
Sulfate as SO ₄	0.30 mg/L	3.96	1240 [1]	-	-	-	-

Kirby Gray
Technical Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 01-Aug-16
		Received: 01-Aug-16
		Reported: 02-Aug-16 12:26

LAB #	W16H0001-01	-	-	-	-	-
SAMPLE ID	006-08-01-16	-	-	-	-	-
	08/01/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0044 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	19.2 [3]	-	-	-	-
Zinc	0.020 mg/L	0.206	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.11 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.0	-	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 01-Aug-16
		Received: 01-Aug-16
		Reported: 03-Aug-16 10:07

LAB #	WSH0002-01	WSH0002-02	-	-	-	-
SAMPLE ID	KT-08-01-16	QC-08-01-16	-	-	-	-
	08/01/2016 07:30	08/01/2016 07:30	-	-	-	-

Reporting Limit

Metals (Total) (Water)

Cadmium	0.0100 mg/l.	0.0959	0.0931	-	-	-
Lead	0.0500 mg/l.	0.442	0.425	-	-	-
Manganese	0.0200 mg/l.	78.2 [3]	77.8	-	-	-
Zinc	0.0200 mg/l.	57.5 [1]	57.6 [1] [3]	-	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	9.22 [2]	9.22 [2]	-	-	-
Total Susp. Solids	mg/l.	97.0	93.0	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 03-Aug-16
		Received: 03-Aug-16
		Reported: 04-Aug-16 14:14

LAB #	W16H0047-01	-	-	-	-	-
SAMPLE ID	006-08-03-16	-	-	-	-	-
	08/03/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0035 [3]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	21.5 [1]	-	-	-	-
Zinc	0.020 mg/L	0.206	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.13 [2]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2	-	-	-	-

Kirby Gray
Technical Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 04-Aug-16
		Received: 05-Aug-16
		Reported: 08-Aug-16 13:00

LAB #	WSH0127-01	WSH0127-02	-	-	-	-
SAMPLE ID	KT-08-04-16	CTPXX-08-04-16	-	-	-	-
	08/04/2016 07:30	08/04/2016 07:50	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/l	0.196	0.0308	-	-	-
Lead	0.0500 mg/l	0.436	0.185	-	-	-
Manganese	0.0200 mg/l	32.6	-	-	-	-
Zinc	0.0200 mg/l	102 [1] [2]	0.512 [1] [8]	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	2.94 [3]	-	-	-	-
Total Susp. Solids	5.0 mg/l	16.0	-	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 05-Aug-16
		Received: 05-Aug-16
		Reported: 08-Aug-16 13:13

LAB #	W16H0126-01	-	-	-	-	-
SAMPLE ID	006-08-05-16	-	-	-	-	-
	08/05/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0045 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	15.4 [3]	-	-	-	-
Zinc	0.0200 mg/L	0.238	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.17 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.2	-	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 10-Aug-16
		Received: 10-Aug-16
		Reported: 11-Aug-16 10:24

LAB #	W16H0210-01	-	-	-	-	-
SAMPLE ID	006-08-10-16	-	-	-	-	-
	08/10/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0046 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	23.3 [3]	-	-	-	-
Zinc	0.020 mg/L	0.222	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.05 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.8 [2]	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 12-Aug-16
		Received: 12-Aug-16
		Reported: 15-Aug-16 15:09

LAB #	W16H0291-01	-	-	-	-	-
SAMPLE ID	006-08-12-16	-	-	-	-	-
	08/12/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0040 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	15.0 [3]	-	-	-	-
Zinc	0.020 mg/L	0.234	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.19 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.8 [2]	-	-	-	-

John Kern
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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 15-Aug-16
		Received: 15-Aug-16
		Reported: 18-Aug-16 12:57

LAB #	WIS0336-01	-	-	-	-	-
SAMPLE ID	KT-08-15-16	-	-	-	-	-
	08/15/2016 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0685	-	-	-	-
Lead	0.0500 mg/L	0.434 [3]	-	-	-	-
Manganese	0.0200 mg/L	77.1	-	-	-	-
Zinc	0.020 mg/L	55.1 [1] [3]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	5.27 [2]	-	-	-	-
Total Susp. Solids	mg/L	79.0	-	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 15-Aug-16
		Received: 15-Aug-16
		Reported: 16-Aug-16 15:21

LAB #	W16H0335-01	-	-	-	-	-
SAMPLE ID	006-08-15-16	-	-	-	-	-
	08/15/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0044 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	15.9 [3]	-	-	-	-
Zinc	0.020 mg/L	0.220	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.22 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	-	-	-	-

John Kern
Laboratory Director



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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 11-Aug-16
		Received: 12-Aug-16
		Reported: 18-Aug-16 12:43

LAB # SAMPLE ID	WISH0292-01 KT-08-11-16	WISH0292-02 PTM-08-11-16	WISH0292-03 OC-08-11-16	WISH0292-04 CTPXX-08-11-16	WISH0292-05 RB-08-11-16	WISH0292-06 TB-08-11-16
Reporting Limit	08/11/2016 07:30	08/11/2016 08:00	08/11/2016 08:00	08/11/2016 07:50	08/11/2016 08:00	08/11/2016 08:00

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.196	1.40	1.38	0.0538	<0.0009 [4]	<0.0009 [4]
Lead	0.0500 mg/L	0.439	0.0052 [3]	0.0049 [3]	0.325	<0.0036 [4]	<0.0036 [4]
Manganese	0.0200 mg/L	32.1	-	-	-	-	-
Zinc	0.0200 mg/L	108 [1]	10.9	10.8	0.907	<0.003 [4]	<0.003 [4]

Classical Chemistry Parameters (Water)

pH	pH Units	6.50 [2]	6.58 [2]	2.87 [2]	-	-	-
Total Susp. Solids	mg/L	38.0	1.2	1.0	-	-	-

John Kern
Laboratory Director



One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 17-Aug-16
		Received: 17-Aug-16
		Reported: 18-Aug-16 12:41

LAB #	W16H0393-01	-	-	-	-	-
SAMPLE ID	006-08-17-16	-	-	-	-	-
		08/17/2016 06:00	-	-	-	-
		Reporting Limit				

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.0045 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	23.2 [3]	-	-	-	-
Zinc	0.020 mg/L	0.209	-	-	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	7.24 [1]	-	-	-	-
Total Susp. Solids	mg/L	5.0	0.4 [2]	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 18-Aug-16
		Received: 19-Aug-16
		Reported: 23-Aug-16 10:51

LAB #	WSH0478-01	WSH0478-02	-	-	-	-
SAMPLE ID	KT-08-18-16	CTPXX-08-18-16	-	-	-	-
	08/18/2016 07:30	08/18/2016 07:50	-	-	-	-

Reporting Limit

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.185	0.0517	-	-	-	-
Lead	0.0500 mg/L	0.426	0.313	-	-	-	-
Manganese	0.0200 mg/L	32.0	-	-	-	-	-
Zinc	0.0200 mg/L	111 [1]	0.866	-	-	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	2.96 [2]	-	-	-	-	-
Total Susp. Solids	mg/L	14.0	-	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 19-Aug-16
		Received: 19-Aug-16
		Reported: 22-Aug-16 15:30

LAB #	W16H0477-01	-	-	-	-	-
SAMPLE ID	006-08-19-16	-	-	-	-	-
		08/19/2016 06:00	-	-	-	-
		Reporting Limit				

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.0032 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [3]	-	-	-	-
Manganese	0.0200 mg/L	11.9	-	-	-	-
Zinc	0.020 mg/L	0.158	-	-	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	7.21 [1]	-	-	-	-
Total Susp. Solids	mg/L	5.0	0.8 [2]	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 22-Aug-16
		Received: 22-Aug-16
		Reported: 23-Aug-16 13:52

LAB #	W16H0505-01	-	-	-	-	-
SAMPLE ID	KT-08-22-16	-	-	-	-	-
	08/22/2016 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0647	-	-	-	-
Lead	0.0500 mg/L	0.432	-	-	-	-
Manganese	0.0200 mg/L	74.5 [4]	-	-	-	-
Zinc	0.020 mg/L	52.9 [1] [4]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	9.35 [2]	-	-	-	-
Total Susp. Solids	mg/L	81.0	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 22-Aug-16
		Received: 22-Aug-16
		Reported: 23-Aug-16 13:50

LAB #	W16H0504-01	-	-	-	-	-
SAMPLE ID	006-08-22-16	-	-	-	-	-
	08/22/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0041 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	19.3 [3]	-	-	-	-
Zinc	0.020 mg/L	0.207	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.20 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.6 [2]	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 24-Aug-16
		Received: 24-Aug-16
		Reported: 25-Aug-16 14:02

LAB #	WSH0551-01	WSH0551-02	-	-	-	-
SAMPLE ID	006-08-24-16	0C-08-24-16	-	-	-	-
	08/24/2016 06:00	08/24/2016 06:00	-	-	-	-

Reporting Limit

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.0046 [1]	0.0047 [1]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [3]	<0.0036 [3]	-	-	-	-
Manganese	0.0200 mg/L	25.1 [2]	25.1	-	-	-	-
Zinc	0.020 mg/L	0.223	0.221	-	-	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	7.19	7.34	-	-	-	-
Total Susp. Solids	mg/L	5.0	1.0	-	-	-	-

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Ferguson Contracting
901 N. Division
Pinehurst, ID 83850

Project: BHCTP

Sampled: 25-Aug-16
Received: 26-Aug-16
Reported: 30-Aug-16 12:27

LAB #	WISH0620-01	WISH0620-02	WISH0620-03	-	-	-
SAMPLE ID	KT-08-25-16	PTM-08-25-16	CTPXX-08-25-16	-	-	-
Reporting Limit	08/15/2016 07:30	08/15/2016 07:30	08/15/2016 07:30	-	-	-

Metals (Total) (Water)

Cadmium	0.0100 mg/L	0.174	1.27	0.0512	-	-
Lead	0.0500 mg/L	0.413	<0.0006 [3]	0.324	-	-
Manganese	0.0200 mg/L	30.2	-	-	-	-
Zinc	0.020 mg/L	94.8	9.73	0.873	-	-

Classical Chemistry Parameters (Water)

pH	pH Units	2.86 [1]	6.89 [1]	-	-	-
Total Susp. Solids	mg/L	5.0	15.0	1.0	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 26-Aug-16
		Received: 26-Aug-16
		Reported: 29-Aug-16 14:37

LAB #	WIEH0619-01	-	-	-	-	-
SAMPLE ID	006-08-26-16	-	-	-	-	-
		08/16/2016 06:00	-	-	-	-
		Reporting Limit				
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0040 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [3] [4]	-	-	-	-
Manganese	0.0200 mg/L	17.4 [3]	-	-	-	-
Zinc	0.020 mg/L	0.229	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.10 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	1.4	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 29-Aug-16
		Received: 29-Aug-16
		Reported: 30-Aug-16 14:57

LAB #	W16H0649-01	-	-	-	-	-
SAMPLE ID	006-08-29-16	-	-	-	-	-
	08/19/2016 06:00	-	-	-	-	-
Reporting Limit						
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0045 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	21.9 [3]	-	-	-	-
Zinc	0.020 mg/L	0.229	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.30 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.6 [2]	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 29-Aug-16
		Received: 29-Aug-16
		Reported: 31-Aug-16 10:25

LAB #	WISH0650-01	-	-	-	-	-
SAMPLE ID	KT-08-29-16	-	-	-	-	-
	08/19/2016 07:30	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0789	-	-	-	-
Lead	0.0500 mg/L	0.407	-	-	-	-
Manganese	0.0200 mg/L	74.2 [4]	-	-	-	-
Zinc	0.020 mg/L	44.7 [4]	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	5.36 [2]	-	-	-	-
Total Susp. Solids	mg/L	77.0	-	-	-	-

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Ferguson Contracting 901 N. Division Pinehurst, ID 83850	Project: BHCTP	Sampled: 31-Aug-16
		Received: 31-Aug-16
		Reported: 01-Sep-16 14:19

LAB #	W16H0692-01	-	-	-	-	-
SAMPLE ID	006-08-31-16	-	-	-	-	-
	08/31/2016 06:00	-	-	-	-	-
Metals (Total) (Water)						
Cadmium	0.0100 mg/L	0.0044 [2]	-	-	-	-
Lead	0.0500 mg/L	<0.0036 [4]	-	-	-	-
Manganese	0.0200 mg/L	26.3 [3]	-	-	-	-
Zinc	0.020 mg/L	0.242	-	-	-	-
Classical Chemistry Parameters (Water)						
pH	pH Units	7.22 [1]	-	-	-	-
Total Susp. Solids	5.0 mg/L	0.6 [2]	-	-	-	-

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